IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	George Treacy		
Application No.:	09/942,075	Group Art Unit:	1644
Filed:	August 28, 2001	Examiner:	Nolan, P.
Confirmation No.:	6161		

For: ANTI-TNFα ANTIBODIES IN THERAPY OF ASTHMA

CERTIFICATE OF MAILING OR TRANSMISSION

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as First Class Mail in an envelope addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, or is being facsimile transmitted to the United States Patent and Trademark Office on:

7-25-05 Laura M Myers
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Laura M Myers
Typed or printed name of person signing certificate

DECLARATION OF DON E. GRISWOLD, PH.D.
UNDER 37 C.F.R. § 1.132

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

I, Don E. Griswold, Ph.D., declare and state that:

1. I have been employed at Centocor, Inc., 200 Great Valley Parkway, Malvern, PA 19355 since 2001, most recently as ~~Senior Director~~ and Head, Department of Immunobiology. I have been advised that Centocor is the assignee of the entire right, title and interest of the subject application.

2. I received my Ph.D. degree in Pharmacology from the University of Kansas Medical Center, Kansas City, Kansas in 1969. A copy of my curriculum vitae, which describes my educational and professional experience, is attached as Exhibit A.

3. I have published extensively in refereed publications, most of which have been focused in the areas of inflammation, immunopharmacology, and pulmonary and cutaneous pharmacology. A list of publications authored or co-authored by me is included as part of my curriculum vitae.

4. I have read the Office Action dated May 18, 2004, the Office Action dated August 21, 2003, and the art cited by the Examiner in the Office Actions, in particular the cited references of Konno *et al.* (*Int. Arch. Allergy Immunol.,* 105:308-316 (1994)), Shah *et al.* (*Clin. Exper. Allergy*, 25:1038-1044 (1995)), and Lukacs *et al.* (*J. Immunol.*, 154:5411-5417 (1995)). I have also read the patent application and the presently pending claims that were rejected in the Office Action.

5. Le *et al.*, U.S. Patent No. 5,698,195, discloses lung pathology generically, but does not disclose asthma.

6. Konno *et al.* examined the influence of roxithromycin (RXM), a macrolide antibiotic, and polyclonal rabbit anti-mouse TNFα antibodies on cytokine appearance in mouse lung extract induced by lipopolysaccharide (LPS) inhalation and on bronchial responsiveness (BR) to methacholine (Mch) in LPS-treated mice. Although inhalation of LPS causes pulmonary inflammatory responses and an increase in BR, it is not considered as an animal model for asthma. Thus, results obtained using the LPS mouse model would not provide evidence for the treatment of asthma.

7. Shah *et al.* summarize the scientific rationale available in 1995 that supported TNFα as an attractive target for asthma. In particular, Shah *et al.* report results showing (1)

increased levels of TNFα in sputum of patients with acute attacks of asthma; (2) increased number of cells expressing TNFα mRNA in bronchoalveolar lavage (BAL) fluid of stable atopic asthmatic subjects when compared to BAL of normal subjects; and (3) TNFα levels up to 20 times greater in BAL fluid of patients with symptomatic asthma than asymptomatic patients. From these results, Shah *et al.* concluded that "it appears that there is a disease related upregulation of TNFα which suggests that this cytokine plays a key role in ongoing airways inflammation" (page 1040, column 2, lines 6-8).

Shah *et al.* also report results indicating that TNFα may be associated with acquired airway hyperresponsiveness, a pathophysiological hallmark of asthma, and provided the scientific rationale available in 1995 that supported TNFα as an attractive target for asthma. However, Shah *et al.* do not disclose scientific data showing that blocking TNFα would treat asthma. Accordingly, Shah *et al.* do not provide evidence that would have taught one of ordinary skill in the art to effectively treat asthma or airway inflammation associated with in a human patient with an anti-TNFα antibody.

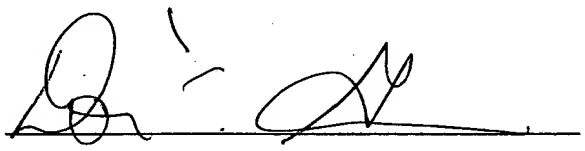
8. Lukacs *et al.* examined the role of TNF in the initiation and maintenance of leukocyte recruitment in airway inflammation induced by intratracheal challenge with soluble parasite (*Schistosoma mansoni*) egg Ag (SEA). The SEA-induced airway inflammation model used by Lukacs *et al.* is a model of Th2 cell-induced eosinophilic airway inflammation that allows for the study of the recruitment of various leukocyte subsets to lungs and airways. This model of airway inflammation has both an early neutrophilic (8-h) and a later (48-h) eosinophilic airway infiltration.

However, Lukacs *et al.* treated SEA-challenged mice with a TNF receptor antagonist (sTNFR-Fc), not with an anti-TNFα antibody. Since more than one cytokine can bind to TNFR, sTNFR-Fc is not as specific as a neutralizing anti-TNFα mAB. As a matter of fact, TNF receptor antagonists antagonize the activities of both TNFα and TNFβ (lymphotoxin), whereas anti-TNFα antibodies do not neutralize the activity or effect of lymphotoxin.

Thus, Lukacs *et al.* do not provide data that would have led one of ordinary skill in the art to conclude that administration of an anti-TNF antibody to a subject would be

effective in methods of treating asthma, in methods of treating airway inflammation associated with asthma, and in methods of reducing accumulation in lungs of inflammatory cells associated with asthma.

9. I declare that all statements made in this Declaration of my own knowledge are true and that all statements made on information and belief are believed to be true. Moreover, these statements are made with the knowledge that willful false statements and the like made by me are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.



Don E. Griswold, Ph.D.

July 21, 2005

Date

Attachment

Exhibit A Curriculum vitae, including list of publications

CURRICULUM VITAE

Don E. Griswold, Ph.D.

November, 2004

ADDRESS: Centocor, Inc.
Department of Immunobiology
200 Great Valley Parkway
Malvern, PA USA 19355-1307

TELEPHONE: (610) 651-6994
FAX: (610) 240-4064

DATE AND PLACE OF BIRTH: June 24, 1943, Newton, Kansas

EDUCATION:

Institution	Degree	Date Received	Major(s)
University of Kansas Medical Center Kansas City, Kansas	Ph.D.	1969	Pharmacology
Emporia State University Emporia, Kansas	B.A.	1965	Microbiology and Chemistry

PROFESSIONAL EXPERIENCE:

CENTOCOR, INC.

Senior Director and Head, Department of Immunobiology (January 2001-Present)
I am currently directing efforts to discover and promote biological therapeutics with potential utility in the treatment of immune-mediated inflammatory disorders. In addition, support of collaborations among Centocor Research departments as well as J&J member companies involved in this area of research is on going.

SMITHKLINE BEECHAM PHARMACEUTICALS

Director, Department of Pulmonary Pharmacology (June 1998-December 2000)
I conducted and directed broad-based research in the areas of pulmonary and cutaneous pharmacology. My efforts involved the molecular biological and biochemical evaluation of mediators in different disease models. In addition, we developed *in vivo* models with the key feature of providing evidence of mechanism of action and proof of concept. This research was directed toward several disease targets including asthma, COPD, psoriasis, atopic dermatitis and eczema.

Associate Director, Department of Immunopharmacology (1994-1998)
I conducted and directed broad-based research in inflammation and immunopharmacology. My effort involved the search for inflammation-associated novel gene expression in different disease models and identification of human homologs. In addition, we developed both i*n vitro* and *in vivo* models with the key feature of providing evidence of mechanism of action.

Assistant Director, Department of Inflammation and Respiratory Pharmacology. (1990-1994)
I coordinated inflammation research efforts and provided critical in vivo and/or in vitro model systems for several major strategic areas. We identified and brought forward development candidates in several of these areas.

Assistant Director, Department of Immunology. (1986-1990)
Initially as Deputy Director of the Inflammation and Arthritis Program, and later supervising that position, I coordinated a team of thirty scientists in the discovery and development of antiinflammatory and antiarthritic drugs. A unique class of antiinflammatory/antiarthritic agents (pyrroloimidazoles) was discovered and the lead compound was recommended for clinical development. Several compounds were identified for pre-development consideration. In addition, selective 5-LO agents were discovered and promoted as anti-asthmatic agents.

Senior Investigator, Department of Immunology. (1978-1986)
I supervised several associates and one Ph.D. and his staff in conducting in vitro and in vivo/ex vivo assays to measure the inhibition of leukotriene and prostanoid production. In addition, key model systems to differentiate lipoxygenase inhibitors from cyclooxygenase inhibitors were developed and adopted. Key findings were the immunoregulatory actions of Ridaura (auranofin), the action of histamine type-2 receptor antagonists on T suppressor cell function, and the characterization of the immunosuppressive effects of concanavalin A.

Associate Senior Investigator, Department of Pharmacology. (1974-1978)
I conducted adjuvant rat studies as a primary in vivo screen for antiarthritic agents. I also participated in the development of auranofin (Ridaura) and developed immunological models to explore the immunopharmacology of key compounds of interest. I had responsibility for the majority of the pharmacology conducted in the Arthritis and Immunoregulatory Research Mission.

BROWN UNIVERSITY
Division of Bio-Medical Sciences and Department of Medicine
Roger Williams General Hospital
Providence, RI

Assistant Professor (Research) of Medicine. (1973-1974)
I participated in fundamental cancer research. Our findings included demonstration of selective immunosuppression by cytostatic/cytotoxic drugs. I acted as advisor to 3 Masters of Medical Science students, lectured and conducted laboratory experiences for Brown University students.

University Instructor. (1971-1973)
I conducted research in cancer and immunopharmacology. I participated in teaching of Brown University students.

Research Fellow. (1969-1971)
I evaluated and developed methods to examine drug hypersensitivity and initiated work on immunoregulatory action of cytotoxic agents.

UNIVERSITY OF KANSAS MEDICAL CENTER
Department of Pharmacology
Rainbow Boulevard
Kansas City, Kansas

Graduate Student Laboratory Assistant. (1966-1969)
I was responsible for setup and conduct of the Pharmacology laboratory experience for medical students. I was also responsible for pharmacology lectures for nursing students.

EMPORIA STATE UNIVERSITY
Department of Microbiology
Emporia, Kansas

Research Assistant. (1963-1965)
I conducted research in microbiology and immunology and initiated research on assays of antibody-forming cells in amphibia (Rana pipiens). The work was presented at a regional meeting of the American Society for Microbiology.

HONORS, AWARDS, AND MEMBERSHIPS:

- Who's Who in Frontier Science and Technology Nomination Committee, Alfred P. Sloan Jr. Prize, General Motors Cancer Research Foundation
- Lambda Delta Lambda
- Sigma Xi
- American Association for Cancer Research
- American Association for the Advancement of Science
- New York Academy of Science
- American Society for Pharmacology and Experimental Therapeutics
- The Society for Investigative Dermatology
- American Thoracic Society
- Centocor Research Executive Committee Member
- J&J Immunologically-Mediated Inflammatory Disorders/Pulmonary Therapeutic Area Optimization Committee (TAOC) and Core TAOC Member

EDITORIAL RESPONSIBILITIES:

Inflammation Research
Cancer Research
Science
International Journal of Immunopharmacology
Expert Opinion on Therapeutic Patents
British Journal of Pharmacology
Journal of Pharmacology and Experimental Therapeutics
General Pharmacology, The Vascular System
American Journal of Respiratory and Critical Care Medicine

CONFERENCES AND SYMPOSIA ORGANIZED:

Workshop on Inflammation Models IRA 1994

INVITED PRESENTATIONS, SEMINARS AND SYMPOSIA:

Griswold. D.E. Pharmacology of Cytokine Suppressive Anti-Inflammatory Drugs / CSAID. Presented at SRI Conference entitled "On the Cutting Edge of Anti-Inflammatory Drug Discovery" New York, New York March 13-14, 1995.

Griswold, D.E. Pharmacology of an Emerging Dermatology Portfolio. Presented at Galderma, Paris, France, October 16, 1996.

Griswold, D.E. Pharmacology of an Emerging Dermatology Portfolio. Presented at LEO Pharmaceuticals, Copenhagen, Denmark, October 18, 1996.

Griswold, D.E. Pharmacology of an Emerging Dermatology Portfolio. Presented at Schering AG, Berlin, Germany, November 1, 1996.

Griswold, D.E. Pharmacology of CSBP/p38 Inhibitors. Presented to Department of Dermatology, University of Nijmegen, Nijmegen, The Netherlands. February 6, 1997.

Griswold, D.E. Pharmacology of MAP Kinase Inhibitors. Presented at IBC Conference entitled " New Drugs for Asthma." National Heart and Lung Institute, London, UK June 16 and 17, 1998.

Griswold, D.E. Pharmacology of p38 Kinase Inhibitors. Presented at an Imperial College Conference entitled "Conquering Airway Inflammation in the 21st Century", National Heart and Lung Institute London, UK September 14-16, 1998.

Griswold, D.E. Invited Lecture on Eiscosanoid Pharmacology. Thomas Jefferson University. Oct 1, 1998.

Griswold, D.E. Institut Pasteur EuroConference on Chronic Lung diseases, talk entitled "Will antibodies have a role in the therapy of COPD?" Paris, France June 27-29, 2001

Griswold, D.E. Invited presentation to Groningen Research Institute for Asthma and COPD. Groningen, The Netherlands January, 2003

Griswold, D.E. Invited presentation to Professor Stephen Holgate and staff at University of Southampton, UK, July, 2003

Griswold, D.E. and Anuk Das. Invited presentation to Professor Peter Barnes and Trevor Hansel at National Heart and Lung Institute, London, UK, April, 2004

PATENTS:

1. U.S. Patent 4,686,231 issued August 11, 1987.

2. U.S. Patent 4,778,806 issued October 18, 1988.

3. U.S. Patent 4,780,470 issued October 25, 1988.

4. U.S. Patent 4,794,114 issued December 27, 1988.

5. U.S. Patent 5,134,150 issued July 28, 1992.

6. U.S. Patent 5,317,019 issued May 31, 1994.

7. U.S. Patent 5,824,696 issued October 20, 1998.

8. U.S. Patent 5,929,096 issued July 27, 1999.

9. U.S. Patent 5,981,538 issued November 9, 1999

PATENTS (continued)

10. U.S. Patent 6,759,410 issued July 6, 2004

PUBLICATIONS :

1. Griswold, D.E., and Uyeki, E.M.: Immunosuppressant effect of salicylates and quinine on antibody-forming cells. Eur. J. Pharmacol. 6:56-60 (1969).

2. Griswold, D.E., and Uyeki, E.M.: The effect of 5-fluorouracil on direct and developed spleen hemolysin plaque-forming cells in mice. Tumori 12:109-114 (1969).

3. Griswold, D.E., and Uyeki, E.M.: Quantitation of immediate hypersensitivity in various mouse strains. Int. Arch. Allergy and Ap. Immun. 40:682-690 (1971).

4. Griswold, D.E., Heppner, G.H., and Calabresi, P.: Selective suppression of humoral and cellular immunity with cytosine arabinoside. Cancer Res. 32:298-301 (1972).

5. Calabresi, P., Griswold, D.E., Poplin, E.A. and Heppner, G.H.: Selective immunosuppression by drugs in complex immune responses. Pharmacology and the future of man. Proc. 5th Intl. Cong. Pharmacol. 5:421-430 (1972).

6. Griswold, D.E., Heppner, G.H., and Calabresi, P.: Alteration of immunocompetence by mammary tumor virus. J. Natl. Cancer Inst. 50:1035-1038 (1973).

7. Laing, C.A., Griswold, D.E., and Heppner, G.H.: A new method for the quantitation of tumor growth in situ: Measurement by plethysmography. J. Natl. Cancer Inst. 51:1345-1348 (1973).

8. Mourachian, H., and Griswold, D.E.: A method for permanently recording micro-hemagglutination patterns. J. Immunol. Meth. 4:29 (1974).

9. Griswold, D.E., DiLorenzo, J.A., and Calabresi, P.: Quantitation and pharmacological dissection of oxazolone-induced contact sensitivity in the mouse. Cellular Immunol. 11:198-204 (1974).
10. Griswold, D.E., and Calabresi, P.: Human leukocyte reactivity to penicilloylated erythrocytes. Blood 44:501-509 (1974).

11. DiLorenzo, J.A., Griswold, D.E., Bareham, C.R., and Calabresi, P.: Selective alteration of immunocompetence with methotrexate and 5-fluorouracil. Cancer Res. 34:124-128 (1974).

12. Bareham, C.R., Griswold, D.E., and Calabresi, P: Synergism of methotrexate with Imuran and with 5-fluorouracil and their effects on hemolysin plaque-forming cell production in the mouse. Cancer Res. 34:571-575 (1974).

13. Medina, D., Stockman, G., and Griswold, D.E.: Significance of chemical carcinogen-induced immunosuppression in mammary tumorogenesis in Balb/c mice. Cancer Res. 34:2663-2668 (1974).

14. Heppner, G.H., Griswold, D.E., DiLorenzo, J.A. Poplin, E.A., and Calabresi, P: Selective Immunosuppression by Drugs in Balanced Immune Responses. Fed. Proc. 33:1882-1885 (1974).

15. Griswold, D.E., Heppner, G.H., and Calabresi, P.: Stimulation of hemolysin plaque-forming cells by iododeoxyuridine. Cancer Res. 35:88-93 (1975).

16. Griswold, D.E., Kropp, J.S., Manning, J.S., and Heppner, G.H.: Correction of a murine mammary tumor virus accociated immunological depression by selective immunosuppression with cytosine arabinoside. Cancer Res. 35:2670-2674 (1975).

17. Griswold, D.E. and Walz, D.T. : Condition-dependent immunoregulatory control of contact sensitivity by levamisole. Inflammation 2:277-284 (1977).

18. Griswold, D.E. and Walz, D.T.: Restoration of methotrexate-suppressed oxazolone-induced contact sensitivity with levamisole. Inflammation 3:111-116 (1978).

19. Walz, D.T., and Griswold, D.E.: Immunopharmacology of gold sodium thiomalate and auranofin (SK&F D-39162): Effects on cell-mediated immunity. Inflammation 3:117-128 (1978).

20. Walz, D.T., Griswold, D.E., DiMartino, M.J., and Bumbier, E.E.: Distribution of gold in blood following administration of auranofin (SK&F D-39162). J. Rheumatol. 6:56-60 (1979).

21. Walz, D.T., DiMartino, M.J., Griswold, D.E.: Immunopharmacology of auranofin and gold sodium thiomalate: Effects on humoral immunity. J. Rheumatology 6:74-81 (1979).

22. Walz, D.T., Griswold, D.E., DiMartino, M.J. and Bumbier, E.E.: Pharmacokinetics of gold following administration of auranofin (SK&F D-39162) and myochrysine to rats. J. Rheumatol. 7:820-824 (1980).

23. Walz, D.T., Griswold, D.E., DiMartino, M.J., and Bumbier, E.E.: Effect of auranofin dose regimen change upon cell-associated gold in rheumatoid arthritis patients. J. Rheumatology 8:829-832 (1981).

24. Griswold, D.E., and Walz, D.T.: The effect of selected immunoregulatory agents on low grade contact sensitivity. Inflammation 6:55-62 (1982).

25. Badger, A.M., Griswold, D.E., and Walz, D.T.: Augmentation of Concanavalin A-induced immunosuppression by indomethacin. Immunopharmacology 4:149-162 (1982).

26. Walz, D.T., DiMartino, M.J., and Griswold, D.E.: Mechanisms of action of auranofin: Effects on humoral immune response. J. Rheumatol. 9:32-36 (1982).

27. Walz, D.T., DiMartino, M.J., and Griswold, D.E.: Comparative pharmacology and biological effects of different gold compounds. J. Rheumatol. 9:54-60 (1982).

28. Griswold, D.E., Alessi, S., Webb, E.F., and Walz, D.T.: The inhibition of carrageenan-induced inflammation by urethan anesthesia in adrenalectomized and sham-operated rats. J. Pharmacol. Meth. 8:161-164 (1982).

29. Griswold, D.E., Alessi, S. and Walz, D.T.: Stimulation of contact sensitivity to oxazolone by disodium cromoglycate. Int. arch. Allergy Appl. Immuno. 69:93-97 (1982).
30. Sitrin, R.D., Antell, L., Griswold, D.E., Bender, P.E., Greig, R.G., and Poste, G.: A high performance liquid chromotography assay for the rapid analysis of the sub-unit content of concanavalin A. B.B.B. 717:175-178 (1982).

31. Badger, A.M., Griswold, D.E., DiMartino, M.J., and Poste, G.: Inhibition of antibody synthesis by histamine in concanavalin A-treated mice: possible role of glucocorticoids. J. Immunology. 129:1017-1022 (1982).

32. Walz, D.T., Griswold, D.E., DiMartino, M.J., and Bumbier, E.E.: Patterns of decay of serum, blood, and cell-associated gold following intravenous administration of auranofin, gold sodium thiomalate and aurothioglucose to rats. J. Rheumatology 10:117-120 (1983).

33. Hanna, N., DiMartino, M.J., Griswold, D.E., and Poste, G.: Immunology of auranofin- An overview. Excerpta Medica, Current Clinical Pratice Series, No. 7, pp. 60-70 (1983).

34. Walz, D.T., DiMartino, M.J., and Griswold, D.E.: Differences in the mechanism of action between oral and parenteral gold. Rheumatology. 8:99-117 (1983).

35. Griswold, D.E., Badger, A.M., Bender, P.E., Sitrin, R.D., Antell, L., Greig, R.G., and Poste, G.: Differential effects of intact subunits and nicked fragments of concanavalin A on immune functions in vitro. J. Immunol. 131:1626-1628 (1983).

36. Walz, D.T., DiMartino, M.J., Griswold, D.E., Intoccia, A.P., and Flanagan, T.L.: Biologic actions and pharmacokinetic studies of auranofin. Am. J. Med. 75:90-108 (1983).

37. Lantos, I., Bender, P.E., Razagaitis, K.A., Sutton, B.M., DiMartino, M.J., Griswold, D.E., and Walz, D.T.: Antiinflammatory activity of 5,6-diaryl-2,3,-dihydroimidazo[2,1,-b]thiazoles. Isomeric 4-pyridyl and 4-substituted phenyl derivatives. J. Med. Chem. 27:72-75 (1984).

38. Walz, D.T., DiMartino, M.J., and Griswold, D.E.: The pharmacological profile of auranofin, an orally active gold compound. Scan. J. Rheumatol. pp. 16-25. Suppl. 51 (1984).
39. Griswold, D.E., Alessi, S., Badger, A.M., Poste, G., and Hanna, N.: Inhibition of T suppressor cell expression by histamine type 2 (H_2) receptor antagonists. J. Immunol. 132:3054-3057 (1984).

40. Webb, E.F., and Griswold, D.E.: Microprocessor-assisted plethysmograph for measuring mouse paw volume. J. Pharmacol. Meth. 12:149-153 (1984).

41 Muirhead, K.A., Kloszewski, E.D., Antell, L.A., and Griswold, D.E.: Identification of live cells for flow cytometric analysis of lymphoid subset proliferation in low viability populations. J. Immunol. Meth. 77:77-86 (1985).

42. Griswold, D.E., Lee, J.C., Poste, G., and Hanna, N.: Modulation of macrophage-lymphocyte interactions by the antiarthritic gold compound, auranofin. J. Rheumatol. 12:490-497 (1985).

43. Bender, P.E., Hill, D.T., Offen, P.H., Razgaitis, K., Lavanchy, P., Stringer, O.D., Sutton, B.M., Griswold, D.E., Dimartino, M.J., Walz, D.T., Lantos, I., and Ladd, C.B.: 5,6-diaryl-2,3-dihydroimidazo [2.1-b] thiazoles: A new class of immunoregulatory antiinflammatory agents. J. Med. Chem. 28:1169-1177 (1985).

44. Griswold, D.E., Antell, L., Bender, P.E., Hanna, N., and Poste, G.: Induction of suppressor cells, interleukin-2 production, and mitogenesis with monomeric concanavalin A: Different action of tetrameric and monomeric concanavalin A. Molecular Immunol. 22:1311-1316 (1985).

45. Griswold, D.E., Webb, E.F., Clark, M.A., and Mong, S.: Phlogistic activity of leukotriene D_4 in the mouse. Inflammation 10:1-7 (1986).

46. Griswold, D.E., Hillegass, L., Antell, L., Shatzman, A., and Hanna, N.: Quantitative western blot assay for measurement of the murine acute phase reactant, serum amyloid P component. J. Immunol. Methods. 91:163-168 (1986).

47. Griswold, D.E., Alessi, S., Badger, A.M., Poste, G., and Hanna, N.: Differential sensitivity of T suppressor cell expression to inhibition by histamine type 2 receptor antagonists. J. Immunol. 137:1811-1815 (1986).
48. DiMartino, M.J., Griswold, D.E., Berkowitz, B.A., Poste, G., and Hanna, N.: Pharmacologic characterization of the antiinflammatory properties of a new dual inhibitor of lipoxygenase and cyclooxygenase. Agents and Actions. 20:113-123 (1987).

49. Griswold, D.E., Webb, E., Schwartz, L.M. and Hanna, N.: Arachidonic acid-induced inflammation: Inhibition by the dual inhibitor of arachidonic acid metabolism, SK&F 86002. Inflammation. 11:189-199 (1987).

50. Griswold, D.E., Marshall, P.J., Webb, E.F., Godfrey, R., Newton, J, Jr., DiMartino, M.J., Sarau, H.M., Gleason, J.G., Poste, G. and Hanna, N.: SK&F 86002: A structurally novel antiinflammatory agent that inhibits lipoxygenase- and cyclooxygenase-mediated metabolism of arachidonic acid. Bioch. Pharm. 36:3463-3470 (1987).

51. Smith, E.F. III, Egan, J.W., Bugelski, P.J., Hillegass, L.M., Hill, D.E., and Griswold, D.E.: Temporal relation between polymorphonuclear leukocyte accumulation and myocardial reperfusion injury in the rat. Am. J. Physiol. 255:H1060-1068 (1988).

52. Lee, J.C., Griswold, D.E., Votta, B., and Hanna, N.: Inhibition of monocyte IL-1 production by the antiinflammatory compound, SK&F 86002. Intl. J. Immunopharmacol. 10:835-843 (1988).

53. Griswold, D.E., Hillegass, L.M., Meunier, P.C., DiMartino, M.J., and Hanna, N.: Effect of inhibitors of eicosanoid metabolism in murine collagen-induced arthritis. Arth. Rheum. 31:1406-1412 (1988).

54. Griswold, D.E., Hillegass, L.M., Hill, D.E., Egan, J.W. and Smith, E.F. III: Method for quantification of myocardial infarction and inflammatory cell infiltration in rat cardiac tissue. J. Pharmacol. Meth. 20:225-235 (1988).

55. Griswold, D.E., Hillegass, L.M., Hill, D.E., Sherief, H.T., and Kopia, G.A.: Evaluation of the effect of Evan's blue and triphenyltetrazolium chloride dyes on myeloperoxidase activity in canine cardiac tissue. J. Pharmacol. Meth. 21:13-19 (1989).

56. Isab, A.A., Horman, A.L., Hill, D.T., Griswold, D.E., DiMartino, M.J., and Shaw, C.F. III : Bis(trienthylphosphine)gold(I) chloride: Ionization in aqueous solution, reduction in vitro of the external and internal disulfide bonds of bovine serum albumin and anti-arthritic activity. Inorganic Chem. 28:1321-1326 (1989).

57. Smith, E.F. III, Griswold, D.E., Egan, J.W., Hillegass, L.M., and DiMartino, M.J.: Reduction of myocardial damage and polymorphonuclear leukocyte accumulation following coronary artery occulusion and reperfusion by the thromboxane receptor antagonist BM 13.505. J. Cardiovasc. Pharmacol. 13:715-722 (1989).

58. Egan, J.W., Griswold, D.E., Hillegass, L.M., Newton, J.F., Eckardt, R.D., Slivjak, M.T., and Smith, E.F. III. Selective antagonism of peptidoleukotriene responses does not reduce myocardial damage or neutrophil accumulation following coronary artery occlusion with reperfusion. Prostaglandin. 37:597-613 (1989).

59. Smith, E.F., III, Egan, J.W., and Griswold, D.E.: Effect of propranolol on ischemic myocardial damage and left ventricular hypertrophy following permanent coronary artery occlusion followed by reperfusion. Pharmacology. 38:298-309 (1989).

60. Rachmilewitz, D., Simon, P.L., Schwartz, L.W., Griswold, D.E., Fondacaro, J.D., and Wasserman, M.A.: Inflammatory mediators of experimental colitis in rats. Gastroenterology 97:326-337 (1989).

61. Lee, J.C., Votta, B., Griswold, D.E., and Hanna, N.: Inhibitory effect of SK&F 86002 on monocyte IL-1 production. Agents and Actions. 27:280-281 (1989).

62. Griswold, D.E., Hoffstein, S., Marshall, P.J., Webb, E.F., Hillegass, L., Bender, P. and Hanna, N.: Inhibition of inflammatory cell infiltration by bicyclic imidazoles, SK&F 86002 and 104493. Inflammation. 13:727-739 (1989).

63. Griswold, D.E., Hillegass, L., Rotilio, D., Mong, S., and Hanna, N.: Absence of a lyso-PAF relationship to PAF (platelet activating factor) in monosodium urate crystal-induced inflammatory exudates. Eicosanoids. 2:151-156 (1989).

64. Bonne, C., Miller, A., Latour, E., Tissie, G., Emerit, I., Modat, G., Dornard, J., Roch, M., Giroud, J.P., Griswold, D.E., Marshall, P.J. and Coquelet, C.: 2-(2-Hydroxy-4-methylphenyl)aminothiazole hydrochloride as a dual inhibitor of cyclooxygenase/ lipoxygenase and a free radical scavenger. Drug Res. 39, 1242-1245 (1989).

65. Bonne, C., Latour, E., Muller, A., deKozak, Y., Faure, J.-P., Malet, F., Colin, J., Tissot, M., Giroud, J.-P., Maghni, K., Sirois, P., Griswold, D.E., and Coquelet, C.: 2-(2-hydroxy-4-methylphenyl) aminothiazole hydrochloride as a dual inhibitor of cyclooxygenase/ lipoxygenase and a free radical scavenger: Antiinflammatory activity. Arzneim-Forsch/Drug Res. 39:1246-1250 (1989).

66. Badger, A.M., Griswold, D.E., Poste, G., and Hanna, N.: Histamine modulation of murine suppressor cell function. Histamine and H_2antagonists in inflammation and immunodeficiency. 1:3-21 (1990).

67. Lee, J.C., Votta, B., Dalton, B.J., Griswold, D.E., Bender, P.E., and Hanna, N.: Inhibition of human monocyte IL-1 production by SK&F 86002. Intl. J. of Immunotherapy 6:1-12 (1990).

68. Hanna, N., Marshall, P.J., Newton, J. Jr., Schwartz, L., Kirsh, R., DiMartino, M.J., Adams, J., Bender, P, and Griswold, D.E.: Pharmacological profile of SK&F 105809, a dual inhibitor of arachidonic acid metabolism. Drugs Under Experimental and Clinical Research 16:137-148 (1990).

69. Hillegass, L.M., Griswold, D.E., Brickson, B., and Albrightson-Winslow, C.: Assessment of myeloperoxidase activity in whole rat kidney. J. Pharmacological Methods 24: 285-295 (1990).

70. Griswold, D.E., Marshall, P., Martin, L., Webb, E.F., and Zabko-Potapovich, B. Analgetic activity of SK&F 105809, A dual inhibitor of arachidonic acid metabolism. Drugs in Inflammation Agents and Actions Supplement 32: 113-117 (1991).

71. Yared, A., Albrightson-Winslow, D., Griswold, D., Takahasi, K., Fogo, A., and Badr K.F. Functional significance of leukotriene B_4 in normal and glomerulonephritic kidneys in the rat. J. Am Soc Nephrol. 2: 45-56 (1991).

72. Barone, F.C., Hillegass, L.M., Feuerstein, G.Z., Sarau, H.M., Clark, R.K., and Griswold, D.E. Polymorphonuclear leukocyte infiltration into cerebral focal ischemic tissue: Myeloperoxidase activity assay and histologic verification. Journal of Neuroscience Research. 29:336-345 (1991).

73. Rabinovici, R., Esser, K.M., Lysko, P.G., Yue, T.-L., Griswold, D.E., Hillegass, L.M., Bugelski, P.J., Hallenbeck, J.M., and Feuerstein, G. Priming by platelet-activating factor of endotoxin-induced lung injury and cardiovascular shock. Circulation Research 69: 12-25 (1991).

74. Griswold, D.E., Martin, L., Ventre, J., Meunier, L. and Perry, L. Technique for quantification of LTB_4-induced changes in peripheral granulocyte counts in vivo in the rabbit. J. Pharmacol. Methods 25:319-328 (1991).

75. Griswold, D.E., Webb, E.F. and Hillegass, L.M. Induction of Plasma Exudation and Inflammatory Cell Infiltration by Leukotriene C_4 and Leukotriene B_4 in Mouse Peritonitis. Inflammation 15:251-258 (1991).

76. Marshall, P.J., Griswold, D.E., Breton, J., Webb, E.F., Hillegass, L.M., Sarau, H.M., Newton, J. Jr., Bender, P.E. and Hanna, N. Pharmacology of the pyrroloimidazole, SK&F 105809-I. Inhibition of inflammatory cytokine production, 5-lipoxygenase- and cyclooxygenase-mediated metabolism of arachidonic acid. Biochemical Pharmacology 42:813-824 (1991).

77. Griswold, D.E., Marshall, P.J., Lee, J.C., Webb, E.F., Hillegass, L.M, Wartell, J., Newton, J. Jr., and Hanna, N. Pharmacology of the pyrroloimidazole, SK&F 105809-II. Antiinflammatory activity and inhibition of mediator production in vivo. Biochemical Pharmacology 42:825-831 (1991).

78. Shilcrat, S., Hill, D., Bender, P., Griswold, D.E., Baures, P., Eggleston, D., Lantos, I., and Pridgren, L. Synthesis, X-ray crystal structure determination and antiinflammatory activity of the regioisomers: 5-phenyl-6-(4-pyridyl)-2,3-dihydroimidazo[2,1-b]thiazole and 6-phenyl-5-(4-pyridyl)-2,3-dihydroimidazo[2,1-b]thiazole. A structural reassignment. J. Heterocyclic Chem.28: 1181-1187 (1991).

79. Smith, E.F. III, Nichols, A.J., Sellers, T.S., O'Brien, S.R., Griswold, D.E., Egan, J.W., Hillegass, L.M., Vasko, J.A., Slivjak, M.J., Davis, P.A., Wolff, C.E., and M.J. DiMartino. Reduction in Myocardial ischemic/reperfusion injury and neutrophil accumulation following therapeutic administration of streptokinase. J. Cardiovascular Pharmacology 18:729-738 (1991).

80. Griswold, D.E., Connor, J.R., Dalton, B.J., Lee, J.C, Simon, P., Hillegass, L., Sieg, D.J., and Hanna, N. Activation of the IL-1 Gene in UV-Irradiated Mouse Skin: Association with Inflammatory Sequelae and Pharmacological Intervention. J. Invest. Dermatol. 97: 1019-1023 (1991).

81. Turner, C.R., Lackey, M.N., Quinlan, M.F., Griswold, D.E., Schwartz, L.W., and Wheeldon, E.B. Therapeutic intervention in a rat model of adult respiratory distress syndrome. II. Lipoxygenase pathway inhibition. Circulatory Schock 34:263-239 (1991)

82. Smith, E.F. III, Griswold, D.E., Hillegass, l.M., Slivak, M.J., Davis, P.A., and DiMartino, M.J.: Cardioprotective effects of the vasodilator/beta-adrenoceptor blocker, carvedilol, in two models of myocardial infarction in the rat. Pharmacol. 44:297-305 (1992).

83. Rabinovici, R., Yeh, C.G., Hillegass, L.M., Griswold, D.E., Vernick, J., Smith, R.A.G., and Feuerstein, G. Soluble complement receptor type 1 prevents endotoxin/PAF-induced lung injury. J.C.I. 89:1669-1673 (1992).

84. Barone, F.C., Schmidt, D.B., Hillegass, L.M., Price, W.J., White, R.F., Feuerstein, G.Z., Clark, R.K., Lee, E.V., Griswold, D.E., and Sarau, H.M. Reperfusion increases neutrophil and LTB_4 receptor binding in rat focal ischemia. Stroke 23:1337-1347 (1992).

85. Rabinovici, R., Yeh, C.G., Hillegass, L.M., Griswold, D.E., DiMartino, M.J. Vernick, J., Fong, K-L.L., and Feuerstein, G. Role of complement in endotoxin/platelet-activating factor-induced lung injury. J.Immumol. 149:1744-1750 (1992).

86. Griswold, D.E., Webb, E.F., Breton, J., White, J.R., Marshall, P.J., and Torphy, T.J. Effect of the selective phosphodiesterase type IV inhibitor, rolipram on the fluid and cellular phases of the inflammatory response. Inflammation 17: 333-344 (1993).

87. Badger, A.M., Swift, B.A., Webb, E.F., Clark, R.K., Bugelski, P.J., and Griswold, D.E. Beneficial effects of SK&F 105685 in rat adjuvant arthritis: Prophylactic and therapeutic effects on disease parameter progression. Int. J. Immunopharmac. 15: 343-352 (1993).

88. Daines, R.A., Chambers, P.A., Pendrak, I., Jakas, D.R., Sarau, H.M., Foley, J.J., Schmidt, D.B., Griswold, D.E., Martin, L.D., Tzimas,M.N.,and Kingsbury, W.D. (E)-3-[[[6-(2-Carboxyethenyl)-5-[[8-(4-methoxyphenyl) octyl] octyl]-2-pyridinyl]-me;thyl]thio]methyl]benzoic Acid: A novel high affinity leukotriene B_4 antagonist. J. Med Chem. 36:2703-2705 (1993).

89. Smith E.F. III, Griswold, D.E., Egan, J.W., Hillegass, L.M., Smith, R.A.G., Hibbs, M.J., and Gagnon, R.C. Reduction of myocardial reperfusion injury with human soluble complement receptor type 1 (BRL 55730). European J. Pharmacology 236:477-481 (1993).

90. Rabinovici, R., Bugelski, P.J., Esser, K.M., Hillegass, L.M., Griswold, D.E., Vernick, J., and Feuerstein. Tumor necrosis factor-alpha mediates endotoxin-induced lung injury in platelet activating factor-primed rats. JPET 267:1550-1557 (1993).

91. Griswold, D.E., L.M. Hillegass, and J.R. White. Pharmacological evaluation of leukotriene biosynthesis and vascular permeability in an adoptive model of peritoneal anaphylaxis in the mouse. Drug Development Research 30:83-90 (1993).

92. Breton, J., Keller, P., Chabot-Fletcher, M., Hillegass, L.M., DeWolf, W. Jr., and Griswold, D.E. Use of a continuous assay of oxygen consumption to evaluate the pharmacology of 5-lipoxygenase inhibitors. Prostaglandins Leukotrienes Essen. Fatty Acids 49:929-937 (1993).

93. Lee, J.C., A.M. Badger, D.E. Griswold, D. Dunnington, A. Truneh, B. Votta, J.R. White, P.R. Young and P.E. Bender. Bicyclic imidazoles as a novel class of cytokine biosynthesis inhibitors. Annals of New York Academy of Science. 696:149-170 (1993).

94. Griswold, D.E., L.M. Hillegass, K. Esser, and J. Adams. In vivo differentiation of classical non-steroidal antiinflammatory drugs (NSAIDS) from cytokine suppressive antiinflammatory drugs (CSAIDS^{TM}) and other pharmacological classes using mouse tumor necrosis factor alpha (TNF) production. Drugs Under experimental and clinical Research 19: 243-248(1993).

95. Marshall, L.A., Winkler, J.D., Griswold, D.E., Bolognese, B., Roshak, A., Sung, C-M., Webb, E. F., and Jacobs, R. Effects of scalaradial, a Type II PLA_2 inhibitor, on human neutrophil arachidonic acid mobilization and lipid mediator formation. JPET 268: 709-717 (1994).

96. Albrightson, C.R., Dytko, G., Zabko-Potapovich, B., Brickson, B., Adams, J.L., and Griswold, D.E. Selective Inhibition of 5-Lipoxygenase (5-LO) attenuates glomerulonephritis in the rat. Kidney International. 45: 1301-1310 (1994).

97. Newsholme, S.J., Griswold, D.E., and Schwartz, L. Conjunctival leukocyte infiltration evoked by leukotrienes: Differing responses amoung rodent species. J. Lipid Mediators Cell Signalling 9: 197-203 (1994).

98. Chabot-Fletcher, M., Breton, J., Lee, J., Young, P., and Griswold, D.E. Regulation of interleukin-8 production by human keratinocytes: The role of protein kinase C. J. Invest. Derm. 103: 509-515 (1994).

99. Daines, R.A., Chambers, P.A., Eggleston, D.S., Foley, J.J., Griswold, D.E., Haltiwanger, R.C., Jakas, D.R., Kingsbury, W.D., Martin, L.D., Pendrak, I., Schmidt, D.B., Tzimas, M.N., and Sarau, H.M. (E)-3-[[[[6-(2-Carboxyethenyl)-5-[[8-(4-methoxyphenyl)octyl]oxy]-2-pyridinyl]-methyl]thio]methyl]benzoic acid and related compounds: High affinity leukotriene B4 receptor antagonists. J. Med. Chem. 37: 3327-3336 (1994).

100. Hensley, P., McDevitt, P.J., Brooks,I., Trill, J.J., Feild, J., McNulty, D.E., Connor, J.R., Griswold, D.E., Kumar, V., Kopple, K.D., Carr, S.A., Dalton, B.J., Johanson, K. The soluble form of E-selectin is an asymmetric monomer: Expression, purification, and characterization of the recombinant protein. J. Biol. Chem. 269: 23949-23958 (1994).

101. Reddy, M.P., Webb, E.F., Cassatt, D., Maley, D. Lee, J.C., Griswold, D.E., and Truneh, A. Pyridinyl imidazoles inhibit the inflammatory phase of delayed type hypersensitivity reactions without affecting T-dependent immune responses. International journal of Immunopharmacology 16: 795-804 (1994).

102. Lee, J.C., Prabhakar, U., Griswold, D.E., Dunnington, D., Young, P.R., and Badger, A. Low molecular weight TNF biosynthesis inhibitors: Strategies and Prospectives. Circulatory Shock 44:97-103 (1994).

103. Hay, D.W.P. and Griswold, D.E. Inhibitors of Fatty Acid-derived Mediators. In: Lipid Mediators (ed F. Cunningham). A volume in The Handbook of Immunopharmacology. Academic Press Ltd. London pp 117-180 (1994).

104. Griswold, D.E., Chabot-Fletcher, M., Webb, E.F., Martin, L., and Hillegass, L. Antiinflammatory activity of auranofin in arachidonic acid- and phorbol ester-induced inflammation in mice. Drug Development Research 34: 369-375 (1995).

105. Sarau, H.N., Foley, J.J., Schmidt, D.B., Tzimas, M.N., Martin, L.D., Daines, R.A., Chambers, P.A., Kingsbury, W.D., and Griswold, D.E. SB 209247, A high affinity LTB4 receptor antagonist demonstrating potent antiinflammatory activity. Advances in Prostaglandin, Thromboxane, and Leukotriene Research 23: 275-277 (1995).

106. Barone, F.C., Hillegass, L.M., Tzimas, M.N., Schmidt, D.B., Foley, J.J., White, R.F., Price, W.J., Feuerstein, G.Z., Clark, R.K., Griswold,. D.E., and Sarau, H.M. Time-related changes in myeloperoxidase activity and leukotriene B4 receptor binding reflect leukocyte influx in cerebral focal stroke. Molecular and Chemical Neuropathology 24: 13-30 (1995).

107. Chabot-Fletcher, M.C., Underwood, D.C., Breton, J.J., Adams, J.L., Kagey-Sobotka, A., Griswold, D.E., Marshall, L.A., Sarau, H.M., Winkler, J.D., and Hay, D.W.P. Pharmacological characterization of SB 202235, a potent and selective 5-lipoxygenase inhibitor: effects in models of allergic asthma. JPET 273:1147-1155 (1995).

108. Lee, J.C., Prabhakar, U., Adams, J. and Griswold, D.E. Cytokine suppressive anti-inflammatory drugs. Modulation of inflammatory responses in severe sepsis. Prog. Surg. 20: 125-135 (1995).

109. Gallagher, T.F., Fier-Thompson, S.M., Garigipati, R.S., Sorenson, M.E., Smietana, J.M., Lee, D., Bender, P.E., Lee, J.C., Laydon, J.T., Griswold, D.E., Chabot-Fletcher, M.C., Breton, J.J. and Adams, J.L. 2,4,5-Triarylimidazole inhibitors of IL-1 biosynthesis. Bioorg. Med. Chem Lett 5:1171-1176 (1995).

110. Griswold, D.E. and Tzimas, M. Ultraviolet B-induced inflammatory cytokine production, in vivo: Initial pharmacological characterization. Inflammation Res. 44:S209-210 (1995).

111. Winkler, J.D., Fonteh, A.N., Sung, C-M, Heravi, J.D., Nixon, A.B., Chabot-Fletcher, M., Griswold, D., Marshall, L.A., and Chilton, F.H. Effects of CoA-independent transacylase inhibitors on the production of lipid inflammatory mediators. JPET 274: 1338-1347 (1995).

112. Grass, D.S. and Griswold, D.E. New Animal Models of Inflammatory Disease Workshop. Agents and Actions Suppl. 47: 165-167 (1995).

113. Daines, R. A.; Chambers, P. A.; Foley, J. J.; Griswold, D. E.; Kingsbury, W. D.; Martin, L. D.; Schmidt, D. B.; Sham, K. K. C.; Sarau, H. M. (E)-3-[6-[[(2, 6-Dichlorophenyl)thio] methyl]-3-(2-phenylethoxy)-2-pyridinyl]-2-propenoic acid: A High Affinity Leukotriene B_4 Receptor Antagonist with Oral Antiinflammatory Activity. J. Med. Chem. 39: 3837-3841 (1996).

114. Griswold, D.E., L.M. Hillegass, J. O'Leary-Bartus, J.C. Lee, J.T. Laydon, T.J. Torphy, Evaluation of human cytokine production and effects of pharmacological agents in a heterologous system in vivo. J. Immunol. Methods 195: 1-5 (1996)

115. Pan, C.G., Bresnahan, B.A., Albrightson, C.R., Griswold, D. and Lianos, E.A. Cytokine inhibition preserves renal hemodynamic function following mesangial cell immune injury. J. Invest. Med. 44: 375-381 (1996).

116. Tzimas, M.N. and D. E. Griswold. A Rapid Method of Obtaining the Nucleotide Sequence of cDNA fragments following RT-PCR and Differential Display. Methods in Molecular and Cellular Biology 5: 377-379 (1996).

117. Boehm, J.C., Smietana, J.M., Sorenson, M.E., Garigipati, R.S., Gallagher, T.F., Sheldrake, P.L., Bradbeer, J., Badger, A.M., Laydon, J.L., Lee, J.C., Hillegass, L.M., Griswold, D.E., Breton, J.J., Chabot-Fletcher, M.C., and Adams, J.L. 1-Substituted 4-Aryl-5-Pyridinyl Imidazoles: A New Class of Cytokine Suppressive Drugs with Low 5-Lipoxygenase and Cyclooxygenase Inhibitory Potency. J.Med Chem. 39: 3929-3937 (1996).

118. Adams, J.L., Garigipati, R. S., Sorenson, M., Schmidt, S. J., Brian, W.R., Newton, J. F., Tyrrell, K.A., Garver, E., Yodis, L.A., Chabot-Fletcher, M, Tzimas, M., Webb, E.F., Breton, J.J. and Griswold, D.E. Bicyclic N-Hydroxyurea Inhibitors of 5-Lipoxygenase: Pharmacodynamic, Pharmacokinetic, and in vitro Metabolic Studies Characterizing N-Hydroxy-N-(2,3-dihydro-6-phenylmethoxy-3-benzofuranyl)urea. J. Med Chem 39: 5035-5046 (1996).

119. Badger, A.M., Bradbeer J.N., Votta, B., Lee, J.C., Adams, J.L. and Griswold, D.E. Pharmacological profile of SB 203580, a selective inhibitor of CSBP/p38 kinase, in animal models of arthritis, bone resorption, endotoxin shock and immune function. JPET 279: 1453-1461(1996).

120. Griswold, D.E. and Adams J.L. Constitutive (COX-1) and Inducible Cyclooxygenase (COX-2): Rationale for Selective Inhibition and Progress to Date. Medicinal Research Reviews. 16:181-206 (1996).

121. Griswold, D.E. and Young, P.R. Pharmacology of Cytokine Suppressive Anti-inflammatory Drug Binding Protein (CSBP), a novel stress-induced kinase. Pharmacology Communications 7: 323-329 (1996).

122. Griswold, D.E. Patent Evaluation of Novel Structures as Phospholipase A2 (PLA2) Inhibitors. Exp. Opin. Ther. Patents. 6:1-4 (1996).

123. Sarau, H.M., Griswold, D.E., Potts, W., Foley, J.J., Schmidt, D.B., Webb, E.F., Martin, L.D., Brawner, M.E., Eishourbagy, N.A., Medhurst, A.D., Giardina, G.A.M. and Hay D.W.P. Nonpeptide tachykinin receptor antagonists. I. Pharmacological and pharmacokinetic characterization of SB 223412, a novel, potent and selective NK-3 receptor antagonist. JPET 281: 1303-1311 (1997).

124. Kumar, S., Tzimas, M.N., Griswold, D.E. and Young, P. Expression of ST2, an interleukin-1 receptor homologue, is induced by pro-inflammatory stimuli. Biochemical and Biophysical Research 235: 474-478(1997).

125. Medhurst, A.D. Hay, D.W.P., Parsons, A.A., Martin, L.D. and Griswold, D.E. *In vitro* and *in vivo* characterisation of NK-3 receptors in the rabbit eye using selective non-peptide NK-3 receptor antagonists. Br. J. Pharmacol. 122: 469-476 (1997).

126. Griswold, D.E., Ruffolo, R.R., Poste, G. and Torphy, T.J. Re-classification of NSAIDs. T.I.P.S. (September, 1997).

127. Jackson, J.R., Bolognese, B., Hillegass, L., Adams, J., Griswold, D.E. and Winkler, J.D. The role of CSBP, p38, a stress response MAP kinase, in angiogenesis and chronic inflammatory disease models. JPET 284: 687-692 (1998).

128. Winkler, J.D. Sung, C-M, Chabot-Fletcher, M., Griswold, D.E., Marshall, Chilton, F.H., Bondinell, W. and Mayer, R.J.: β-lactams SB 212047 and SB 216754 are irreversible, time-dependent inhibitors of CoA-independent transacylase. Mol. Pharmacol. 53: 322-329 (1998).

129. Griswold, D.E., Martin, L.D., Badger, A.M., Breton, J. and Chabot-Fletcher, M. Evaluation of the anti-inflammatory activity of azaspiranes in the skin. Inflammation Research 47:56-61 (1998).

130. White, J.R., Lee, J.M., Young, P.R., Hertzberg, R.P., Jurewicz, A.J., Chaikin, M.A., Widdowson, K., Foley, J.J., Martin, L.D., Griswold, D.E. and Sarau, H.M. Identification of a potent, selective non-peptide CXCR2 antagonist that inhibits IL-8-induced neutrophil migration. J.B.C. 273: 10095-10098 (1998)

131. Christensen, S.B., Guider, A., Forster, C.J., Gleason, J.G., Bender, P.E., Karpinski, J.M., DeWolf, W.E., Jr., Barnette, M.S., Underwood, D.C., Griswold, D.E., Cieslinski, L.B., Burman, M., Bochnowicz, S. Osborn, R.R., Manning, C.D., Grous, M., Hillegass, L.M., O'Leary-Bartus, J., Ryan, M.D., Eggleston, D.S., Haltiwanger, R.C. and Torphy, T.J. 1,4-Cyclohexanecarboxylates: Potent and selective inhibitors of phosphodiesterase 4 for the treatment of asthma. J. Med. Chem. 41: 821-835 (1998).

132. Webb, E.F., Tzimas, M.N., Newsholme, S. and Griswold, D.E. Intralesional cytokines in chronic oxazolone-induced contact sensitivity suggest roles for tumor necrosis factor α and interleukin-4 J. Invest. Derm. 111:86-92 (1998).

133. Griswold, D.E., Webb, E.F., Badger, A.M., Gorycki, P., Lavandoski, P.A., Barnette, M.A., Grous, M., Christensen, S. and Torphy, T.J. SB 207499 (Ariflo™), a second generation phosphodiesterase type 4 inhibitor, reduces TNFα and IL-4 production in vivo. JPET. 287:705-711 (1998).

134. Adams, J.L., Boehm, J.C., Kassis, S., Gorycki, P.D., Hall, R., Sorenson, M., Lee, J.C., Ayrton, A., Griswold, D.E., and Gallagher, T.F. Pyrimidinylimidazole inhibitors of CSBP/p38 kinase demonstrating decreased inhibition of hepatic cytochrome P450 enzymes. Bioorganic and Med. Chem. Letts.8:3111-3116 (1998).

135. Torphy, T.J., Barnette, M.S., Underwood, D.C., Griswold, D.E., Christensen, S.S. IV, Murdoch, R.D., Nieman, R.B., and Compton, C.H. Ariflo™ (SB 207499), a second generation phosphodiesterase 4 inhibitor for the treatment of asthma and COPD: from concept to clinic. Pulmonary Pharmacology and Therapeutic 12:131-135 (1999).

136. Sarau, H.M., Martin, L.D., Webb, E.F., Foley, J.J., Schmidt, D.B., Tzimas, M.N., Breton, J.J., Chabot-Fletcher, M.C., Underwood, D.C., Hay D.W.P., Kingsbury, W.D., Chambers, P.A., Pendrak, I., Jakas, D.R., Sathe, G.M., Van Horn, S., Daines, R.A., and Griswold, D.E. *In vitro* and *in vivo* pharmacological characterization of SB 201993, an eicosanoid-like LTB_4 receptor antagonist with anti-inflammatory activity. Prostaglandins, Leukotrienes and Essential Fatty Acids 61:55-64 (1999).

137. Griswold, D.E., Douglas, S.A., Martin, L.D., Davis, T.G., Davis, L., Schultz, L.B., Ao, Z., Hay, D.W.P., Pullen, M., Nambi, P. and Ohlstein, E.H. Modulatory role of the endothelin B receptor in inflammatory pain and cutaneous inflammation in gene target-disrupted knockout mice. Molecular Pharmacology 56: 807-812 (1999).

138. Badger, A.M., Bradbeer, J.N., Griswold, D.E., Swift, B.A., Rieman, D., Stroup, G.B., Hoffman, S.J., and Gowen, M. Idoxifene, a novel selective estrogen receptor modulator, is effective in animal models of arthritis. JPET 291: 1380-1396 (1999).

139. Badger, A.M., Griswold, D.E., Kapadia, R., Blake, S., Swift. B.A., Hoffman, S.J., Stroup, G.B., Webb, E.F., Rieman, D.J., Gowen, M., John C. Lee and Adams, J.L. SB 242235, a selective inhibitor of p38 mitogen-activated protein kinase, has disease-modifying activity in rat adjuvant-induced arthritis. Arthritis and Rheumatism 43: 175-183 (2000).

140. Podolin, P.L., Webb, E.F., Reddy, M., Truneh, A., and Griswold, D.E. Inhibition of contact sensitivity in human CD4+ transgenic mice by human CD4-specific mAbs: CD4+ Tcell depletion is not required. Immunology 99:287-295 (2000).

141. Underwood DC, Osborn RR, Kotzer C, Adams J, Lee LC, Carpenter D, Bochnowicz S, Thomas H, Hay DWP and Griswold DE. SB 239063, a potent p38 MAP kinase inhibitor reduced inflammatory cytokine production, airways eosinophil infiltration and persistence in vivo. JPET. 293: 281-288 (2000).

142. Kumar S, McDonnell PC, Lehr R, Tierney L, Tzimas MN, Griswold DE, Capper EA, Tal-Singer R, Wells GI, Doyle ML, Young PR. Identification of novel members of the IL-1 family. J. Biol. Chem. 275:10308-10314 (2000).

143. Brooks, D.P., Adams, J., DePalma, P.D., Webb, E.F., Palmer, R.H. and Griswold, D.E. Renal effects of cyclooxygenase inhibitors in volume-depleted dogs. Inflammopharmacology 8:69-79 (2000).

144. Sarau, H.M., Griswold, D.E., Potts, W., Foley, J.J., Schmidt, D.B., Webb, E.F., Martin, L.D., Medhurst, A.D., Giardina, G.A.M. and Hay, D.W.P. Nonpeptide tachykinin receptor antagonists. II. Pharmacological and pharmacokinetic profile of SB 222200, a CNS-penetrant, potent, and selective NK-3 receptor antagonist. J.P.E.T. 295: 373-381 (2000).

145. Underwood, D.C., Osborn, R.R., Bochnowicz, S., Webb, E.F., Rieman, D.J., Lee, J.C., Romanic, A.M., Adams, J.L., Hay, D.W.P., and Griswold, D.E. Reduction of airway neutrophilia, inflammatory cytokine production, matrix metalloproteinase activity and fibrosis by the p38 MAP kinase inhibitor, SB 239063. Am. J. Physiol. 279:L895-L902 (2000).

146. Griswold, D.E., Douglas, S.A., Martin, L.D., Davis, T.G., Davis, L., Schultz, L.B., Ao, Z., Hay, D.W.P., Pullen, M., Nambi, P. and Ohlstein, E.H. Targeted disruption of the ET_B receptor gene attenuates inflammatory nociception and cutaneous inflammation in mice. J. Cardio. Pharmacol. 36: S78-81(2000).

147. Davis, H.M., Carpenter, D.C., Stahl, J.M., Hynicka, W.P. and Griswold, D.E. Inhibition of leukocyte CD11b expression in human studies: A pharmacodynamic marker of LTB_4 receptor antagonism. J. Immunol. Methods 240: 125-132 (2000).

148. Lee, J.C., Kumar, S., Griswold, D.E., Underwod, D.C., Votta, B.J. and Adams, J.L. Inhibition of p38 MAP Kinase as a Therapeutic Strategy. Immunopharmacology. 47: 185-201 (2000).

149. Adams, J.L., Boehm, J.C., Gallagher, T.F., Kassis, S., Webb, E.F., Sorenson, M., Garigipati, R., Griswold, D.E. and Lee, J.C. Pyrimidinylimidazole inhibitors of p38: cyclic N-1 imidazole substitutents Enhance p38 kinase inhibition and oral activity. Bioorg. Med. Chem. Lett. 11: 2867-2870 (2001).

150. Underwood, D.C. and Griswold, D.E. Inhibition of p38 MAP Kinase as Therapy for Chronic Airways Disease. New Drugs for Asthma, Allergy and COPD . New Drugs for Asthma 31: 342-345 (2001).

151. Torphy, T.J., Li, Li, Griswold, D.E. Monoclonal antibodies as a strategy for pulmonary diseases. Current Opinion in Pharmacology 1:265-271 (2001).

152. Hay, D. W.P., Giardina, G.A.M., Griswold, D.E., Underwood, D.C., Kotzer, C.J., Bush, B., Potts, W., Sandhu, P., Lungberg, D., Foley, J., Schmidt, D.B., Martin, L.D., Kilian, D., Legos, J.J., Barone, F.C., Luttmann, M.A., Grugni, M., Sarau, H.M. Nonpeptide Tachykinin Receptor Antagonists. III. SB 235375, A low CNS-penetrant, potent and selective NK-3 receptor antagonist, inhibits citric acid-induced cough and airways hyper-reactivity in guinea pigs. JPET 300: 314-323 (2002).

153. X.Y. Song, Torphy, T.J., Griswold, D.E., Shealy, D. Coming of Age: Anti-cytokine therapies. Mol. Interventions 2:36-46 (2002).

154. Shealy, D.J., Wooley, P.H., Emmell, E., Volk, A., Rosenberg, A, Treacey, G., Wagner, C.L., Mayton, L., Griswold, D.E., Song, X.Y. Anti-TNFα antibody allows healing of joint damage in polyarthritic transgenic mice. Arthritis Res. 4:R7(2002).

155. Li, L., Das, A.M., Torphy, T.J., Griswold, D.E., What's in the pipeline? Prospects for monoclonal antibodies (mAbs) as therapies for lung disease. Pulm. Pharm. Therap. 15:409-416 (2002).

156. Li, L., Das, A.M., Torphy, T.J., and Griswold, D.E. Monoclonal antibody (mAb) based therapeutics for chronic pulmonary diseases- New hopes for patients with asthma and COPD. Proceedings of Biopharmaeutical Conference, Beijing, China (2002).

157. Li, J., Li, S., Li, L., Mbow, L., Griswold, D.E., Schantz, A., Shealy, D., Goletz, G., Wan, J. and Peritt, D., IL-18 induces dendritic cell maturation. Cellular Immunology, 227:103-108 (2004).

158. Bukata, G., Wei, R., Puzas, Z., Schwartz, E., Song, X-Y, Griswold, D.E., O'Keefe, PGE2 and IL-6 Production by Fibroblasts in Response to Titanium Wear Debris Particles is Mediated through a COX-2 dependant pathway. J. Orthopaedic Res. 22:6-12 (2004).

159. Popma, S.H., Griswold, D.E. and Li, L. Anti-CD3 monoclonal antibodies induce mitogenic proliferation but prevent expansion of alloreactive T cells, American Journal of Transplantation, 4, S8, p512, 2004.

160. Widdowson, K.L., Elliott, J.D., Veber, D.F., Nie, H., Rutledge, M.C., McCleland, B.W., Xiang, J-N., Jurewicz, A.J., Hertzberg, R.P., Foley, J.J., Griswold, D.E., Martin, L., Lee, J.M., White, J.R., and Sarau, H.M. Evaluation of Potent and Selective Small Molecule Antagonists for the CXCR2 Chemokine Receptor. J. Med. Chem. 47: 1319-1321 (2004).

161. Yang, G., Emmell, E., X.Z. Shang, J. Li, Shealy, D., Griswold, D. E. and Li, L., Anti-IL-13 antibody inhibits asthma responses as well as prevents airway remodeling. Cytokine, (In Press, 2004)

162. Shang, X., Yang, G., Li, J., Griswold, D.E. and Li, L., Regulation of antigen specific versus by-stander IgE production after antigen sensitization. Cellular Immunology, (In Press, 2004).

163. Li, L., Das, A., Griswold, D.E. and Torphy, T.J., Biopharmaceuticals for asthma remodeling. Current Drug Design, (In Press, 2004).

164. Das, A.M., D.E. Griswold, C.J. Molloy, A.A. Protter and G.J. Laurent. Fighting Pulmonary Fibrosis: New Science Brings New Therapeutic Opportunities. Drug discovery Today (In Press, 2004)

165. Yang, G., Li,L., Volk, A., Emmell, E., Petley, T., Giles-Komar, J., Rafferty, P., Lakshminarayanan, M., Griswold, D.E., Bugelski, P.J. and Das, A.M.. Therapeutic Dosing with Anti-Interleukin-13 Monoclonal Antibody Inhibits Asthma Progression in Mice. JPET (Submitted).

166. Benson, JM, Scott, P, Volk, A, Liu, V, Ghazzouli, T, Cunningham, M, Mbow, L, Huber, J, Orlovsky, Y, and Griswold, DE; The roles of IL-12 and IL-23 in autoimmunity and acute infection. (Submitted).

167. Stowell, N.C., Seideman, J., Griswold, D.E. and Das, A.M.. The role of TNF-alpha in the activation of THP-1 cells by cigarette smoke. (Manuscript in preparation, 2004).

168. Das, A.M., Seideman, J., Duffy, K., Lamb, R., Schneider, M., Griswold, D.E., Sarisky, R.T. and Mbow M.L. Consitutive TNF-alpha Over-expression in the Mouse Lung Alters the Response to Toll-like Receptor 3 Activation . (Manuscript in preparation, 2004).

169. Song, X-Y., Yieh, L., Rosenberg, A., Carmen, A., Liu, X-J., Bittner, A, Griswold, D.E., Wagner, C.L., Baker, D.G. and Gottlieb, A.B. Molecular insights into Infliximab's impact on gene expression profiles in psoriasis. (Manuscript in preparation, 2004).

170. Liu, X.D., Das, A.M., Seideman, J., Griswold, D.E., Kobayashi, S. A., Fang, Q., Hashimoto, M. Wang, X., Shen, L. Kawazaki, S. and Rennard, S. (Manuscript in preparation, 2004).

ABSTRACTS:

1. Griswold, D.E., and Uyeki, E.M.: The effects of anti-tumor agents on paw edema induced by carrageenan, Fed. Proc. 27:534 (1968).

2. Griswold, D.E., and Uyeki, E.M.: Anaphylaxis in the mouse: Drug effects on local and systemic response. Fed. Proc. 28:358 (1969).

3. Griswold, D.E., Heppner, G.H., and Calabresi, P.: Selective manipulation of immunological reponse with cytosine arabinoside. Fed. Proc. 29:431 (1970).

4. Griswold, D.E., Heppner, G.H., and Calabresi, P.: Selective alteration of immunological competence by mammary tumor virus. Proc. Am. Assoc. Cancer Res. 12:99 (1971).

5. Meyer, R.J., Griswold, D.E. and Calabresi, P.: A new assay for anti-penicillin antibody production in man. J. Clin. Invest. 51:65a (1972).

6. Poplin, E.A., Griswold, D.E., Heppner, G.H., and Calabresi, P.: Multiple effects of 5-fluorouracil (5-FU) on immunocompetence. Proc. Am. Cancer Res. 13:85 (1972).

7. Bareham, C.R., Griswold, D.E., and Calabresi, P.: Synergism of immunosuppressive agents. Fed. Proc. 32:700 (1973).

8. DiLorenzo, J.A., Griswold, D.E., and Calabresi, P.: Selective immunosuppression with methotrexate and 5-fluorouracil. Proc. Am. Assoc. Cancer Res. 14:86 (1973).

9. Griswold, D.E., Heppner, G.H., and Calabresi, P.: Enhancement of blocking factor production by mammary tumor virus (MTV) infection. Proc. Am. Assoc. Cancer Res. 15:112 (1974).

10. DiLorenzo, J.A., Griswold, D.E., Heppner, G.H., and Calabresi, P.: Effect of leucovorin on selective immunosuppression with methotrexate (MTX) and 5-fluorouracil (5-FU) in C3HeB/FeJ Mice. Proc. Am. Assoc. Cancer Res. 16:173 (1975).

11. Walz, D.T., DiMartino, M.J., Griswold, D.E., Alessi, S., and Bumbier, E.: Comparison of blood and kidney gold (Au) levels in rats treated with orally administered SK&F D-39162 and parenteral gold sodium thiomalate (GST). Abstracts of VI Intl. Cong. Pharmacol. p. 552 (1975).

12. Bigler, R.D., Griswold, D.E., and Heppner, G.H.: Growth of mammary tumors after lymphocyte removal by antisera. Proc. Am. Cancer Res. 17:31 (1976).

13. Hager, J.C., Griswold, D.E., and Heppner, G.H.: Clinical and immunological behavior of serially transplanted strain Balb/cfC_3H mouse mammary tumors. Proc. Am. Assoc. Cancer Res. 19:16 (1978).

14. Miller, F.R., Griswold, D.E., and Heppner, G.H.: Intratumor immunlogic heterogeneity. Proc. Am. Assoc. Cancer Res. 20:27 (1979).

15. Lantos, I., Bender, P., Razgaitis, K., Sutton, B.M., DiMartino, M., Griswold, D., and Walz, D.: The antiinflammatory activity of 2,3-dihydroimidazo [2,1-b] thiazoles. Study of the isomeric 5/6-(4-pyridyl) and 6/5-(4-substituted phenyl) compounds. 2nd Chem. Cong. N. Am. Paper #60 (1980).

16. Stringer, O., Griswold, D. and Hill, D.T.: Oral gold: dichlorobis [1,2-bis(diethylphosphino) ehtane] digold and related compounds: Their synthesis and antiarthritic activity. 15th Am Chem. Soc. Middle Atlantic regional meeting. (1981).

17. Hill, D.T., Lilisch, S., Stanley, K., Razgaitis, K., Lantos, I., Sutton, B., Walz, D., and Griswold, D.: Oral gold: triethylphosphine gold thiosugars related to auranofin. A novel antiarthritic agent. Their synthesis and antiinflammatory activity. 181st national A.C.S. (1981).

18. Griswold, D.E., DiMartino, M.J., and Walz, D.T.: Mechanism of action of auranofin: Effects on humoral immune response. Presented at Therapeutic Innovation in Rheumatoid arthritis- Worldwide Auranofin Symposium, October 20-22, 1981. Montreal, Quebec, Canada.